



S/N 09/145,595

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Ji Ung Lee

Examiner: Karabi Guharay

Serial No.: 09/145,595

Group Art Unit: 2879

Filed: September 2, 1998

Docket: 303.537US1

Title: FIELD EMISSION DEVICES HAVING STRUCTURE FOR REDUCED  
EMITTER TIP TO GATE SPACING

**RESPONSE UNDER 37 C.F.R. § 1.116**

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Commissioner for Patents  
Washington, D.C. 20231

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**REMARKS**

Applicant has carefully reviewed and considered the Final Office Action mailed September 1, 2000, and the references cited therewith.

Claims 36-46 remain pending in this application.

**§103 Rejection of the Claims**

Claims 36-46 were rejected under 35 USC § 103(a) as being unpatentable over Cloud (U.S. 5,653,619). The rejection states in relevant part:

Cloud et al. further disclose that a distance separating the number of cathode emitter tips from the number of gate lines is significantly thinner than a separation distance separating the number of gate lines and the substrate (see Fig 1, Fig 2, and Fig 2B).

The Examiner's conclusion from observation of Figures 1, 2, and 2B does not accord with the support and enablement provided in the Cloud reference. At column 5, line 42 of the Cloud reference, the enablement specifically states that "the thickness of this first insulating layer 18 will **substantially** determine **both** the gate 15 to cathode 13 spacing, as well as the gate 15 to substrate spacing 11. Applicant submits that this description is directly contrary to the claimed limitations of Applicant's independent claims 36 and 43. Applicant's independent claims 36 and 43 recite that "a distance separating the number of cathode emitter tips from the number of gate lines is significantly thinner than a separation distance separating the number of gate lines and the substrate." If, as described in Cloud, the thickness of this first insulating layer 18 will **substantially** determine **both** the gate 15 to cathode 13 spacing, as well as the gate 15 to substrate spacing 11, the respective distances will be the same. The drawings shown in Cloud

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should be interpreted in view of the detailed description provided therein.

Accordingly, Applicant submits that the claimed structure in independent claims 36 and 43 defines over the description provided in Cloud. Applicant respectfully requests reconsideration and withdrawal of the 103 rejection for independent claims 36 and 43, as well as those claims which depend therefrom. Alternatively, Applicant respectfully requests a reference per MPEP 2144.03 which provides a description which reads on the above claimed elements and limitations.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6913 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

JI UNG LEE

By their Representatives,

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Date 11/1/2000 By E.J. Brooks III  
Edward J. Brooks, III  
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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, Washington, D.C. 20231, on this 1 day of October, 2000.

Name Tony R. Lee

Signature Tony R. Lee